

REMARKS

This Amendment is respectfully submitted to place rejected claims of subject Application in condition for allowance. Claim 1 at 1(b), lines 1 and 4, has been amended to recite "sulfur and nitrogen containing" as suggested by Examiner Singh. Claim 1 have been further amended to more clearly point out the patentable subject matter of Applicants novel invention.

In particular, Claim 1 has been amended to recite Applicants' novel process for reducing the sulfur and/or nitrogen content of a distillate feedstock to produce refinery transportation fuel or blending components for refinery transportation fuel wherein the feedstock contains heteroaromatic sulfur-containing and nitrogen-containing organic impurities which process comprises:

15 Contacting the feedstock with an oxygen-containing gas in an oxidation zone at oxidation conditions comprising elevated temperatures in a range from about 250 degrees F to about 330 degrees F in the presence of an oxidation catalyst comprising at least one active Group VIII metal selected from the group consisting of the *d*-transition elements in the Periodic Table having atomic number from 21 to 30 inclusive, and a basic support selected from the group consisting of alkali oxides and alkaline earth oxides to convert at least a portion of the heteroaromatic sulfur-containing and nitrogen-containing 20 organic impurities to higher boiling, more polar oxidized sulfur-containing and nitrogen-containing compounds; and

25 Separating a portion of the oxidized sulfur and/or nitrogen-containing compounds from the oxidation zone effluent as by distillation to a cut point temperature by which 90 percent 30 of the sulfur-containing compounds in the feedstock would boil and thereby recover a distillate effluent having a reduced amount of the oxidized sulfur to a level of 5 ppm or

less and nitrogen-containing compounds and a TAN number of less than about 2.0 mg KOH/g.

Support for amended Claim 1 is found in the Specification, for example at page 14, lines 10 to 17, page 15, lines 13 and 14, 5 page 17, lines 23 to 28, and page 18, lines 4 to 6.

Claim Rejections under Nonstatutory Double Patenting:

Applicants note with appreciation that the terminal disclaimer filed on 08/17/06 has been recorded thereby obviating the provisionally rejections under the judicially created doctrine of obviousness-type double 10 patenting.

Claim Rejections - 35 U.S.C. § 103(a)

In outstanding Office Action, Claims 1, 11, and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Marcilly et al. (USP 5,591,323). Applicants respectfully traverse these rejections.

15 The Marcilly et al. reference of record describes a treatment of a petroleum cut containing mercaptans using porous catalyst wherein the basic matrix is obtained by incorporating an alkaline ion (sodium ion, potassium ion) into a mixed oxide structure which is essentially constituted of aluminum oxides and silicon oxides combined. (first paragraph under 20 Summary of the Invention). The aluminosilicates are said to be closely linked to the active carbon and to a metal chelate thereby showing optimum sweetening catalytic performances when the hydrated level of the catalyst in between 0.1 and 40%. Prolonged use may require water or aqueous alkaline solution to be added to the porous catalyst bed at regular intervals. 25 The metal chelate used as a catalyst is in the form of a phthalocyanine, such as cobalt phthalocyanine. At temperatures above 70 degrees C. (158 degrees F) the stability of the catalyst with a metal chelate base is rapidly reduced, causing degradation in the efficiency of the transformation of the mercaptans into disulphides.

The sweetening process in fixed bed of Marcilly et al. is said to transform mercaptans into disulphides (which may be separated by transfer into an aqueous medium) using a metal phthalocyanine catalyst that degrades at temperatures above 158 degrees F does not suggest even the 5 first critical step of Applicants' novel process which now recites oxidation conditions comprising elevated temperatures in a range from about 250 degrees F to about 330 degrees F. Applicants' oxidation, as now recited in Claim 1, converts at least a portion of the heteroaromatic sulfur-containing compounds to higher boiling, more polar oxidized sulfur containing 10 compounds.

It is the position of Applicants that the Marcilly et al. reference of record does not suggest the essence of their novel multi-step process as recited according to instant Claims 1, 2 and 9 to 12.

Base on the amendments submitted herein, Applicants urge that 15 Claims 1, 2 and 9 to 12, inclusive, all claims now presented, are in condition for allowance. Applicants respectfully request Examiner Singh to pass subject application for allowance.

Do not hesitate to contact Frederick S. Jerome whose telephone 20 number is (630) 832-7974 (FAX (630) 832-7976) if additional assistance is needed regarding this paper or earlier papers for Applicants.

Applicants and their undersigned Attorney appreciate Examiner's attention and further consideration of this matter.

Respectfully submitted,



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